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IS 1097 (1979): Handloom cotton mosquito netting [TXD 32: Textiles Protective Clothing]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 1097 - 1979

Indian Standard
SPECIFICATION FOR
HANDLOOM COTTON MOSQUITO NETTING
(*First Revision*)

UDC 645 427 : 677 21 064



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 8

February 1980

AMENDMENT NO. 1 SEPTEMBER 1982

TO

IS:1097-1979 SPECIFICATION FOR HANDLOOM
COTTON MOSQUITO NETTING

(First Revision)

Alterations

(Page 5, Table 1):

- a) Col 2 and 3, entries against 'Tolerance' and 'Method of Test' - Delete.
- b) Col 4 and 5, against 'Method of Test' - Substitute 'IS:1963-1981[†]' for 'IS:1963-1969[†]'.
- c) Foot-note with '*' mark - Substitute the following note for the existing foot-note:

'Note - Count of yarn is given for guidance only.'
- d) Foot-note with '†' mark - Substitute the following note for the existing foot-note:

'†Methods for determination of threads per unit length in woven fabrics(second revision).'

[Page 6, Table 2, col 4, against Sl No.(111)] -
Substitute 'IS:1383-1977(Mild Method)|| ' for
'IS:1383-1977 '.

(Page 7, clause 6.1, line 3) - Substitute 'IS:293-1980†' for 'IS:293-1967†'.

(Page 7, foot-note with '+' mark) - Substitute the following for the existing foot-note:

'†Code for seaworthy packaging of cotton cloth and yarn (third revision).'

(TDC 13)

Indian Standard

SPECIFICATION FOR HANDLOOM COTTON MOSQUITO NETTING (First Revision)

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(Continued on page 2)

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Indian Standard
SPECIFICATION FOR
HANDLOOM COTTON MOSQUITO NETTING
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 10 September 1979, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

0.2 This standard, which was first published in 1957, has been taken up for revision in order to make it up-to-date. Important changes in the standard are:

- a) deletion of breaking strength values since the standard recommends the use of yarn conforming to IS : 171-1973*; and
- b) inclusion of inspection, marking and packing clauses.

0.3 To familiarize the industry with International System of Units (SI Units), the basic SI Units as well as the recommended SI Units for use in the textile industry are given at the end of the standard (*see* Appendix A).

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of two varieties of handloom cotton mosquito netting, bleached or dyed.

1.2 This standard does not specify the general appearance, feel, finish, etc, of the netting (*see also 3.3*).

*Specification for grey cotton yarn (*second revision*).

†Rules for rounding off numerical values (*revised*).

2. MANUFACTURE

2.1 Yarn — The cotton yarn used in the manufacture of the netting should be satisfactory in evenness and reasonably free from neps and spinning defects. The yarn shall conform to Grade 'C' of IS : 171-1973*.

2.2 Cloth — The netting shall be free from dressing and filling materials and from substances liable to cause subsequent tendering.

3. REQUIREMENTS

3.1 The constructional particulars of netting shall conform to those given in Table 1.

3.2 The colour fastness ratings and other requirements of the netting shall conform to those given in Table 2.

3.3 Sealed Sample — If, in order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade of the netting, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

3.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

4. INSPECTION

4.1 The cloth when visually inspected should be reasonably free from the following defects:

- a) More than two adjacent ends running parallel, broken or missing and extending beyond 20 cm;
- b) Weft crack or more than two missing picks across the width of the material;
- c) Prominently noticeable weft bar due to the difference in raw material, count twist, lustre, etc;
- d) Noticeable selvedge defects;
- e) Noticeable warp or weft float in the body;
- f) Noticeable oil or other stains;
- g) Noticeable hole, cut or tear up to 3 mm size;
- h) Smash rupturing the texture of the fabric;
- j) Undressed snarls noticeable throughout the piece;
- k) Conspicuous gout due to foreign matter usually lint or waste woven;
- m) Conspicuous broken pattern; and
- n) Any other flaw which would mar the appearance or affect the serviceability and/or durability of the towels.

*Specification for grey cotton yarn (second revision).

TABLE 1 CONSTRUCTIONAL PARTICULARS OF HANDLOOM COTTON MOSQUITO NETTING

(Clause 3.1)

VARIETY No.	COUNT OF YARN [COTTON COUNT (UNIVERSAL COUNT)]		ENDS/ cm	PICKS/ cm	LENGTH	WIDTH	WEAVE
	Warp	Weft					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	40s/2 (14.5 tex × 2)	20s (30 tex)	14	14	20 or as agreed	91, 124 or as agreed	4-end mock leno
2	30s (20 tex)	30s (20 tex)	17	17			6-end mock leno
TOLER- ANCE, PERCENT	± 5	± 5	± 5	± 5	—	± 2	—
METHOD OF TEST	IS : 3442-1966*		IS : 1963-1969†		IS : 1954-1969‡		
					Visual		

*Method for determination of crimp and count of yarn removed from fabrics.

†Method for determination of threads per decimetre in woven fabrics (first revision).

‡Method for determination of length and width of fabrics (first revision).

**TABLE 2 REQUIREMENTS OF HANDLOOM COTTON
MOSQUITO NETTING**

(Clause 3.2)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST
(1)	(2)	(3)	(4)
i)	Colour fastness to:		
	a) Light	3 or better	IS : 686-1957* or IS : 2454-1967†
	b) Washing: Test 4	3 or better	IS : 765-1979‡
ii)	Dimensional change, percent, <i>Max</i>	5	IS : 2977-1964§
iii)	Scouring loss, percent, <i>Max</i>	5	IS : 1383-1977
*Method for determination of colour fastness of textile materials to daylight.			
†Method for determination of colour fastness of textile materials to artificial light (xenon lamp).			
‡Method for determination of colour fastness of textile materials to washing: Test 4 (second revision).			
§Method for determination of dimensional changes of woven fabrics (other than wool) on soaking in water.			
Methods for determination of scouring loss in grey and finished cotton textile materials (first revision).			

4.1.1 A reference may be made to IS : 4125-1967* for details of these defects.

5. MARKING

5.1 The cloth shall be suitably marked or labelled with the following information:

- Name of the material;
- Manufacturer's name, initials or trade-mark;
- Length and width of the cloth; and
- Count of warp and weft yarn.

5.1.1 The cloth may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Glossary of terms pertaining to defects in fabrics.

6. PACKING

6.1 Unless otherwise agreed between the buyer and the seller, the cloth shall preferably be packed in bales or cases in conformity with the procedure laid down in IS : 1347-1972* or IS : 293-1967†.

7. SAMPLING

7.1 The quantity (number of pieces) of handloom cotton mosquito netting of the same variety delivered to a buyer against a despatch note shall constitute a lot.

7.2 To ascertain the conformity of the lot to the requirements of this standard, samples shall be drawn and inspected from each lot separately.

7.3 The number of pieces to be selected at random for inspection shall be in accordance with col 1 and 2 of Table 3.

TABLE 3 SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING PIECES

LOT SIZE (NUMBER OF PIECES)	SAMPLE SIZE	PERMISSIBLE NUMBER OF NON-CONFORM- ING PIECES	SUB-SAMPLE SIZE
(1)	(2)	(3)	(4)
Up to 25	3	0	2
26 „ 50	5	0	2
51 „ 150	8	0	3
151 „ 300	13	1	3
301 „ 500	20	1	5
501 and above	32	2	8

7.4 Number of Tests and Criteria for Conformity

<i>Characteristics</i>	<i>Number of Tests</i>	<i>Criteria for Conformity</i>
Visual inspection, ends, picks, length and width	According to col 2 of Table 3	Number of non-conforming pieces should not exceed the corresponding number given in col 3 of Table 3
Dimensional change, scouring loss and colour fastness to washing	According to col 4 of Table 3	All the test specimens shall meet the corresponding requirements
Colour fastness to light	2 for lot size of 500 or less and 3 otherwise	do

*Code for inland packaging of cotton cloth and yarn (*first revision*).

†Code for seaworthy packaging of cotton cloth and yarn (*second revision*).

APPENDIX A

(Clause 0.4)

SI UNITS

TABLE 4 INTERNATIONAL SYSTEM UNITS

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

TABLE 5 RECOMMENDED SI UNITS FOR TEXTILES

Sl No.	CHARACTERISTIC	SI UNITS		APPLICATION
		Unit(s)	Abbreviation(s)	
(1)	(2)	(3)	(4)	(5)
1)	Length	Millimetre Millimetre, centimetre Metre	mm mm, cm m	Fibres Samples, test specimens (as appropriate) Yarns, ropes, cordages, fabrics
2)	Width	Millimetre Centimetre Millimetre, centimetre Centimetre, metre	mm cm mm, cm cm, m	Narrow fabrics Other fabrics Samples, test specimen (as appropriate) Carpets, druggets, <i>DURRIES</i> (as appropriate)
3)	Thickness	Micrometre (micron) Millimetre	μ m mm	Delicate fabrics Other fabrics, carpets, felts
4)	Linear density	Tex Millitex Decitex Kilotex	tex mtex dtex ktex	Yarns Fibres Filaments, filament yarns Slivers, ropes, cordages
5)	Diameter	Micrometre (micron) Millimetre	μ m mm	Fibres Yarns, ropes, cordages
6)	Circumference	Millimetre	mm	Ropes, cordages
7)	Threads in fabric:			Woven fabrics (as appropriate)
	a) Lengthwise	Number per centimetre Number per decimetre	ends/cm ends/dm	
	b) Widthwise	Number per centimetre Number per decimetre	picks/cm picks/dm	
8)	Warp threads in loom	Number per centimetre	ends/cm	Reeds
9)	Stitches in the knitted fabric:			Knitted fabrics (as appropriate)
	a) Lengthwise	Courses per centimetre Courses per decimetre	courses/cm courses/dm	
	b) Widthwise	Wales per centimetre Wales per decimetre	wales/cm wales/dm	

(Continued)

TABLE 5 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

Sl. No.	CHARACTERISTIC	SI UNITS		APPLICATION
		Unit(s)	Abbreviation(s)	
(1)	(2)	(3)	(4)	(5)
10)	Stitch length	Millimetre	mm	Knitted fabrics Made-up fabrics
11)	Mass per unit area	Grams per square metre	g/m ²	Fabrics
12)	Mass per unit length	Grams per metre	g/m	Fabrics
13)	Twist	Turns per centimetre Turns per metre	turns/cm turns/m	Yarns, ropes (as appropriate)
14)	Test or gauge length	Millimetre, centimetre	mm, cm	
15)	Breaking load	Millinewton Newton	mN N	Fibres, delicate yarns (individual or skeins) Strong yarns (individual or skeins), ropes, cordages, fabrics
16)	Breaking length	Kilometre	km	Yarns
17)	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18)	Twist factor or twist multiplier	Turns per centimetre × square root of tex Turns per metre × square root of tex	turns/cm × $\sqrt{\text{tex}}$ turns/m × $\sqrt{\text{tex}}$	Yarns (as appropriate)
19)	Bursting strength	Newton per square centimetre	N/cm ²	
20)	Tear strength	Millinewton Newton	mN N	Fabrics (as appropriate)
21)	Pile height	Millimetre	mm	Carpets
22)	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpets
23)	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/ unit deformation	Fibres, yarns, strands

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Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 26 60 21, 27 01 31

Telegrams : Manaksanstha

Regional Offices :

Western : Novelty Chambers, Grant Road
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